


The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-17 (canceled by preliminary amendment which accompanied this divisional)

Claims 18 (previously amended and currently amended):

A method of preparing a multilayer phosphor product on a substrate comprising the steps of:

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- (a) providing a solution comprising an alkoxide precursor and a dopant precursor;
  - (b) mixing said solution with a solid particle precursor wherein said solid particle precursor has an average particle size of about 7 nm and wherein said solid particle precursor reacts;
  - (c) inducing a sol-gel condensation reaction comprising said alkoxide precursor, said dopant precursor, and said solid particle precursor to form a sol-gel condensation reaction mixture;
  - (d) spreading the sol-gel condensation reaction mixture on a substrate;
  - (e) drying the sol-gel condensation reaction mixture;
  - (f) repeating steps (a) through (e) as needed to produce a desired thickness of film; and
  - (g) heating the thick film to form a phosphor.

19. (original, as added in preliminary amendment): The method according to claim 18, wherein said solution further comprises a hydrolysis agent.

20. (original, as added in preliminary amendment): The method according to claim 18, wherein a hydrolysis agent is added after said step (b).

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21. (original, as added in preliminary amendment): The method according to claim 20, wherein said hydrolysis agent is added immediately before step (c).

22. (original, as added in preliminary amendment): The method according to claim 18, wherein said solution further comprises a reagent capable of inhibiting condensation reactions before step (b) in said solution.

*C1  
contd* 23. (original, as added in preliminary amendment): The method according to claim 19, wherein said hydrolysis agent is selected from the group consisting of water, tetramethylammonium hydroxide, and mixtures thereof.

24. (original, as added in preliminary amendment): The method according to claim 20, wherein said hydrolysis agent is selected from the group consisting of water, tetramethylammonium hydroxide, and mixtures thereof.

25. (original, as added in preliminary amendment): The method according to claim 18, wherein said dopant precursor is an alkoxide, an acetate, an organometallic compound, an inorganic salt, or mixtures thereof.

26. (original, as added in preliminary amendment): The method according to claim 18, wherein said solid particle precursor is silica, metal oxide, metal sulfide, metal oxysulfide, metal halide, metal carbonate, metal phosphate, metal sulfate,  $\text{GeO}_2$ , pure metal or mixtures thereof.

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27. (original, as added in preliminary amendment): The method according to claim 26, wherein  
said solid particle precursor is fumed silica.

*C1  
cancel*  
Claim 28 (canceled)

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